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MANPOWER REQUIREMENTS AND THE TRAINING OF TECHNICAL AND MANAGERIAL PERSONNEL IN THE UAR.

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MANPOWER REQUIREMENTS AND THE TRAINING OF TECHNICAL AND MANAGERIAL PERSONNEL IN THE UAR

EDUCATION AND VOCATIONAL TRAINING SYSTEMS

The educational system in the UAR as it affects the training of sub-professional personnel for industry involves programmes in three separate Ministries:

The Ministry of Education
The Ministries of Industry
The Ministry of Higher Education.

The Ministry of Education maintains a 6-3-3 system of education: 6 years primary stage, 3 years preparatory (lower secondary) stage, and 3 years secondary stage.

The Ministries of Industries maintain vocational training centres at the secondary level, also accelerated training for adults and up-grading of workers.

The Ministry of Higher Education maintains the Universities, the higher institutes, and vocational training centres at the post-graduate level.

The following is a summary of the programmes directed to the production of manpower including semi-skilled workers, skilled workers, technicians, engineers and other specialists.

Public Education

Primary education is conceived as representing the minimum amount of schooling indispensable for the preparation of children to be enlightened and productive citizens.

Preparatory education succeeds primary education from the age of twelve to fifteen.

The modern preparatory school syllabuses include a common measure of culture and academic subjects and proportion of study hours ranging from

15 per cent to 20 per cent allotted for work experience activities which vary according to the requirements of the different local communities.

The aim of work experience areas in this stage is not to qualify a student certain vocation, but to prepare young people for living in an industrialized society, and provide general education required for admission to general secondary education.

The secondary schools follow the preparatory stage and provide for three years from the age of fifteen to eighteen. The secondary general schools are mainly aimed at the preparation of students desiring to join the universities or higher institutes.

The secondary school imparts to the youth love and respect for practical work, prepares them for active industrial work and gives them the employment knowledge. Parallel to the general secondary schools are the various technical and vocational schools.

The primary object of the industrial secondary school is the preparation of skilled workers for industry. Graduates of technical secondary schools with superior academic attainment are permitted to continue advanced training at the higher technical institutes.

It should be stated that the students of the industrial schools are mastering various practical skills related to the whole groups of trades in a particular branch of industry, but they do not acquire sufficient basic skills in a certain speciality. The number of hours allotted to general education subjects are more than these needed for technical instruction and the high ratio of the theoretical studies encourage the students to join the higher engineering institutes.

It is of vital importance to guide students towards the sort of education or vocation they are fit for. Educational systems do not by themselves channel the required manpower to the various sectors of the economy. To bridge the gap between the educational potential and, in this case, the industrial requirements, sophisticated forms of vocational guidance are necessary. Most important of these is the vocational orientation required to inform parents and children on the local

opportunities for employment. Many of the prejudices towards higher education in the face of the lack of opportunity of ability can be cured by well-organized systems of vocational information, including factory visits and discussion with parents and teachers, and details of vocational training schemes open for school leavers.

INDUSTRIAL VOCATIONAL TRAINING IN THE UAR

The Productivity and Vocational Training Department (PVTD) of the Ministry of Industry, since 1958 began to introduce a modern Vocational Training Project with the assistance of the International Labour Organisation (ILO), the project conceived as a part of the Five-Year Industrialization Plan included a nation-wide apprenticeship scheme in all the apprenticeable trades found in industry, as well as accelerated training for adults and up-grading of existing workers.

The Ministry of Industry has established in the first Plan of Social and Economic Development (1960-1965) 41 training centres, and plans in the immediate seven years ahead (1965-1972) to establish an additional 26 such centres for a total of 67. There are, in addition, 10 other training centres belonging to the bid industrial enterprises.

The three systems of training apprenticeship, accelerated training and up-grading can be done in the same training centres. The centres are running on the two-shift systems in order to increase their capacity.

It is estimated that about 16,000 apprentices will be trained every year in these training centres in the morning shift, and a similar number of adults be trained in the evening shift on the accelerated and up-grading systems.

I. Apprenticeship System

This system is by no means new in the UAR. It has been in operation since the ancient Egyptians. This traditional method of training is still applied in handicraft and in small industrial enterprises. The trainees are trained on-the-job without any systematic training. The skills they can gain depend on personal ability to initiate other workers.

The first pilot scheme of a modern apprenticeship system was prepared for metal-working trades, and in October 1956, was the first intake of apprentices. It was suggested that the pilot scheme serves a group of enterprises, as a combination of school instruction and in-plant training, therefore the course combined both practical training and theoretical instruction. The course is divided into two periods, the first of which is for the basic training in the trade skills, for a period of one year, inside a vocational training centre. The second period is of practical training in the plants of the participating enterprises for two years.

During the three years of apprenticeship, five days a week are devoted for practical training, and one day for theoretical teaching in technical subjects and general education.

Based on the experience gained from the pilot scheme P and V.T. Department, the Ministry of Industry completed apprentice training courses for other trades and worked out regulations concerning apprenticeships, including occupational testing of trainees, contract formation, trade and training standards, and follow up trainees during the practical training in the enterprises.

The important feature of correct trainees selection was recognized at the early stage, the result of the pilot scheme showed most clearly that the stream of primary trainees did not possess the satisfactory mental and physical abilities for such apprentice training, thus it was decided to stipulate a satisfactory completion of the preparatory (9 years) general education as admission standard to apprenticeship. The age range was therefore fixed at 14-18 years.

To reduce to a minimum the risk of accepting persons for training in occupations for which they are not suited and consequent risk of wastage of training and human effort, candidates for the training centre are subjected to psychological testing.

The contract of apprenticeship follows the standard pattern and stipulates and contains; duration of apprenticeship, probational period,

duties of employer, apprentice and guardian, apprenticeship allowance, insurance, holidays, sick leave and qualifications obtainable on the completion of apprenticeship.

The establishment of standards started for metal-working trades it was then extended to other vocations which were recognized as apprenticeable and needed by the industry, including automotive, electrical, textile building, printing, glass, leather-tanning, mining, industrial chemistry, fine mechanic and electric trades. The draft for each standard was approved by representatives of industrial enterprises and experts of vocational training. The standards stipulate and contain the following: a brief job description of the trade, the possible scope of activity, the content of the basic practical training, the theoretical instruction to be received at the centre, and the practical on-the-job training to be received in the workshops of the enterprises.

The field of supervision is considered one of the main factors for the success of the apprenticeship scheme. It is aiming to:

(a) Supervise apprentices training in-plants in the second and third year of the course;

(b) Arrange for registration of new apprentices from the different enterprises;

(c) Arrange for results of training, working conditions and examination of the apprentices.

II. Accelerated Training System

Owing to the rapid industrialization in the UAR, a large number of semi-skilled trained workers are required in a short period. As the systematic apprenticeship is of three years and geared to a lower and upper-age limit and to a certain standard of education, only some form of accelerated training counld meet this large number of manpower required for the production, whether it be by industrial enterprises or with the vocational training centres' aid.

In 1960 the Ministry of Industry established a pilot training centre for metal trades on the accelerated training system taking into account the following characteristics:

- Accelerated training involves use of special methods with the object of turning out trained workers for production work, in narrow specializations, and in very short periods.
- A semi-skilled worker is supposed to carry out a certain scope of simple operations on the machinery adjusted by a foreman or a machine tool setter.
- Courses of accelerated training should, in general, be limited to adults.
- To guarantee the success of the training, a subsistence is paid to the trainees during their training period, as adults are often responsible for their families.
- Strict selection procedure to be applied in order to ensure that the trainees have ability to acquire the necessary knowledge in the limited time set for the course.
- In this pilot scheme, the following factors were considered in relation to: (a) the age limit ranges between 18 and 30 years, (b) the completion of the primary education is considered as a satisfactory level of admission, and (c) general good health and no physical disability.
- The duration of the course was 24 weeks for each of the fitting and turning course; 16 weeks for gas and electric welding.

In setting out the course content, it was taken into consideration that the detailed syllabi based on an analysis of the occupation and including gradual exercises and related theory which would provide the trainees with skills and knowledge immediately essential for obtaining employment. The day-to-day technical problems which arise are discussed and explained by the practical instructor during the practical periods. The theoretical instruction was limited to three periods of 45 minutes each week, including trade technology, workshop arithmetic, blue print reading and safety elements.

The apprentice system has only partially succeeded in building trades, because the labour market was not ready to take the apprentices and to continue their training on the job under the supervision of unqualified sub-contractors. Therefore, a decision was made to discontinue the apprentice training in building trades, until the market would be better prepared, and use the building trades centres for training adult workers according to the accelerated training system. Five courses were prepared for brick layer, plasterer, concrete worker, carpenter and plumber. The course length for each of these courses is 11 months.

The Development of Accelerated Training

In July 1961, a reduction in the working hours within 200 industrial companies from 48 to 42 hours per week took place. It involved the engagement of about 31,000 workers, and giving rise to an immediate need for about 21,700 skilled and semi-skilled workers by the industry. The Ministry of Industry, to meet this requirement, set up accelerated training in the evening shift of the standard training centres for metal trades, building, textile, leather-tanning and glass trades. The Ministry of Labour introduced recently a system of accelerated training, similar in principle to that applied by vocational centres of the Ministry of Industry aiming to train unemployed adults needed mainly in the sectors of Housing, Public Utilities, Construction, Communication and Transportation.

In-plant Training

The third industrialization programme (1965-1972) is scheduled to start on 1 July 1965 at the total cost of about £ E 1,128 million. It will provide the employment of 172,000 new skilled and semi-skilled workers, and it is estimated that 17,000 semi-skilled workers to be trained annually during this period. It should be pointed out that it is hardly possible to extend the accelerated training system applied in the vocational training centres, to train the huge number of semi-skilled workers required for the industrial sector. The enterprises should take the responsibility of training newly-admitted semi-skilled workers and

not to allow them to work unless they undergo short-term training directly on-the-job. The training period should vary from 2 to 6 months and include theoretical studies.

Several large companies already have their own vocational training centres. Some of them are sponsored by the Ministry of Education, which provides them with part of the teaching staff and participates in the financial charges.

The cost of establishing and maintaining adequate training centres within individual plants is more than what the majority of enterprises could afford, together with the fact that manpower becomes more efficient if they get some training in the institutions. Therefore, the plans tend towards attaching the vocational training centres established by the Ministry of Industry to its organizations to run them. But until the sufficient means for formal training are accomplished, the main development of skills for small-scale industry will continue to take place on the job.

III. Up-grading Training of Skilled Workers

The aim of the up-grading training is to raise the productivity of workers by improving their skills and teaching them the latest techniques of their trade in short practical training courses. This can be achieved by: courses for improving the skill of tradesmen with their particular trade and courses in subjects related to their individual trades, and of importance to their work so as to improve their usefulness in the whole trade. So the up-grading training is to be carried out on the assumption that a certain amount of skill is already acquired by the worker, but a higher skill is needed.

The first problem dealt with was the fixing of a suitable starting level for the up-grading courses. Information was collected from industry, and so far as no definite level of skills for workers in the same trade were fixed in industry, it was decided to fix the starting level of the pilot course at the finishing level of the apprenticeship system.

The training level was to meet the needs of industry, and the length of the training period depended on that required level. Therefore, it was decided that in the pilot project of metal trades, a course lasting 10 weeks should be provided with 200 hours of practical training and 20 hours of applied technology in each of the trades fitting, turning and welding which were the basic trades in most industrial undertakings.

The content of the courses was carefully adjusted to meet the local requirements of industry. The practical work, included blue-print reading, the use of measuring instruments, the choice of tools, improved work procedures, and newly-developed techniques. Stress was laid on the importance of quality.

Selection of trainees is an important factor in the success of the courses. Applicants must comply with certain conditions in order to benefit from the courses. After selection by their own industrial firms, the trainees were subjected to an interview and a practical examination was held at the centre.

During the course, the competence of each trainee was assessed by the quality of his work in each successive exercise. No final examination was held. If the score at the conclusion of the course proved satisfactory the trainee was given a certificate (for one of the trades). The degree of skill was also given in the certificate.

When it became clear that the up-grading training was successful, it was decided to start courses in other metal trades. A big shortage of milling, tool and dye making, and maintenance workers was evident in the industry. The milling and maintenance courses followed the pattern already set for welding, fitting and turning courses.

No specific training course was given within the apprenticeship system for tool and dye making, and it was decided to base the training in this trade on the assumption that the trainees would be highly skilled fitters. A short course was not found suitable for this trade, and a complete course lasting more than one year was prepared. Because so long a course might not be welcome to industry, it was divided into three

phases; the worker can attend one or more phases, return to work for his firm for a certain time, and then come back to the training centre to continue the course.

Development of Up-grading of Skilled Workers

The demand for up-grading is increasing during this phase of industrialization of the UAR, especially for heavy industry which needs high level of skilled workers. It was decided to include the following up-grading courses: heat treatment, grinding, machine shop maintenance, textile machine maintenance, automotive maintenance, general electrical maintenance, and textile machine setting.

The practical experience in the UAR showed the importance of the following points for the success of an up-grading system:

- Practical work must have top priority in this kind of training, which is much appreciated by industry and grows in importance as the skill requirements of industry increases.
- It is advisable to start with short courses because they are more acceptable to industry. When the benefits of training become evident, longer courses can be introduced.
- The success of the project depends largely on the maintenance of a high standard, especially in matters of accuracy and finish.
- The instructors should always be the best available. They should keep in touch with new techniques, preferably by spending occasional periods in industrial enterprises.
- Close contact must be maintained between the training authorities and industry, particularly in the early years. The follow-up of trainees who have gone back to their jobs is necessary to ensure that their newly-acquired skills and techniques are being actively and properly used.
- An employer who gives a returned trainee an increase of wage or a bonus encourages other workers to apply for training.

TRAINING FOR SMALL-SCALE INDUSTRIES

Large-scale industries provide only a limited number of jobs because of the relatively large amount of capital required per additional worker. Therefore, development and expansion of small-scale industries, cottage and handicraft industries are heavily counted on for employment-creation and relieving underemployment in the rural sector.

In 1960 the Co-operative Production Organization (CPO) for small-scale industries was established, within the Ministry of Industry.

It is entrusted with the provision of technical and financial assistance, material and marketing facilities as well as encouragement of the formation of co-operative organizations. This is fulfilled through the following:

- Establishment of training - cum - production units in the different provinces of the UAR in these handicrafts related to the available raw material, labour and industries. There are now 143 units to train 7,240 workers annually.
- Encouraging the individual private small-scale industries to form co-operatives. Also the training and production units are being gradually converted into co-operative units.
- Establishment of an institute of small-scale industries with the aid of the United Nations. The institute shall train and up-grade the instructors of the training - cum - production units of the Co-operative Production Organization (CPO). It is also concerned with the running of technical and economic research on local material, processes of production and the development of new consumer products.

HIGHER EDUCATION AND MIDDLE MANAGEMENT TRAINING

I. Higher Education

Higher education comprises an important sector in the whole of the UAR educational enterprise. The main responsibilities of higher education are:

(a) To study and plan the higher and post-secondary education policy in the light of the country's needs and objectives.

(b) To adopt such means as would ensure the spread of both university, higher education and post-secondary stage of vocational training centres within the limits of the country's needs.

(c) To link the higher education stage and previous stages to the field of training and business organizations.

The UAR State universities have a varying number of faculties which can be grouped into two main categories of humanistic studies and scientific and technical studies.

The Higher Institutes and Colleges vary according to their objectives; all require for admission the general or technical secondary school certificate, and grant recognized diplomas or degrees after a course of study extending from three to five years.

The programme of the Higher Technical Institutes was distributed over levels. The first is a three-year course of study (the diploma level), and the second lasts for another two years (the specialized technical level). Graduates from the first level serve as technicians, while those from the second serve as technological specialists.

Vocational training centres have been established primarily for students who have completed their general secondary education, or been unable to gain admittance to the universities and high institutes. These centres are aiming to prepare skilled workers and assistant technicians in special occupations needed by the industrial, commercial and agricultural spheres. There are 39 industrial training centres in

fields of specialization including technical drawing, store-keeping, chemical analysis, electrical wiring and fitting, telephone, wireless and metal trades. The duration of training in these centres ranges between 9 and 12 months supplemented by a period of practical training in the factories.

II. Technicians and Foremen Training

As all developing countries, the UAR feels the real shortage of the proper class of technicians, supervisors and foremen. This is mainly due to the greater stress on the university education level rather than on the professional level. The result of this policy is that the labour market finds itself obliged to employ university graduates in jobs not properly suited for their education. In the same way, the skilled workers are not offered the proper up-grading training to improve their abilities to occupy the supervision and foremen positions.

Training courses for supervisors and foremen have been introduced in the UAR since 1956. It was limited to the non-technical aspects supervision. Such schemes as a modified T.W.I. programme for supervision was introduced in most of the industrial enterprises to give the supervisors and foremen an introduction in the non-technical elements of their duties.

The industry is in great need of qualified foremen, especially in the technical aspects of supervision. The extent and nature of training given to potential or existing foremen, however, depends on their existing qualification and experience. Those drawn from skilled worker level may lack the theoretical technical knowledge which a supervisor must have and the general education required as a basis for it. On the other hand, technicians trained in full-time training institutes may not have given sufficient training in the practical tasks they may be required to supervise.

A course is prepared and will be executed this year by the vocational instructor training institute for training sub-foremen and foremen employed in the industry during a period of full-time 8 weeks in the institute. The course is aiming to refresh and enlarge the trade knowledge, to up-grade the foremen in modern trade techniques, to impart the necessary knowledge in the field of management and human relations as required by the foremen in the shop.

III. Industrial Instructor and Teacher Training

The UAR plan for industrialization depends on effective manpower development. Skilled manpower depends on adequately staffed schools and training centres. This calls for the development of planned programmes for the training of instructors, teachers, supervisors and administrators.

At present the practical instructor must have graduated from a secondary industrial school, which the theoretical teacher must have graduated from a university or a higher technical institute. There are three institutes in the UAR which provide programmes for vocational teachers and instructor training:

(a) The Higher Industrial Institute for Teachers

(b) The Technical Training Institute

(c) The Vocational Instructor Training Institute.

The Higher Industrial Institute for Teachers is aiming to prepare teachers for service in the preparatory and secondary industrial schools. The programme of studies is five years leading to a Bachelor of Science in Engineering and Education. The fields of specialization are Mechanical Engineering, Automobile Mechanics, Electric Power, Radio and Architectural Engineering. The nature of the programme of the Institute is very largely one for the preparation in Engineering. Unfortunately all the graduates are offered immediate employment in industry and not placed in teaching positions. There is a great need for inauguration of a training programme aimed at producing leaders for industrial education - persons for service as supervisors and administrators at both ministerial levels and as teacher educators.

The Technical Training Institute aims to train instructors for service in the preparatory and secondary industrial schools. It provides for two entirely separate types of service:

(a) A one-year programme for instructors employed in the secondary industrial schools.

(b) A three-year programme for graduates of secondary general schools who desire to prepare for service as vocational instructors.

In addition, there is a short intensive programme of three months' duration, to up-grade workers from the industry and also a one-year course designed to prepare industrial personnel for service as foremen.

The Vocational Instructor Training Institute has as its purpose the training of instructors to staff the Vocational Training Centres of the Ministry of Industry, the private vocational training centres of big enterprises and instructors needed to supervise the second and third year apprentices during their apprenticeship training in the industry.

The Institute is providing for the following programmes:

(1) One-year basic programme to provide the instructor candidates with sound trade knowledge and establish proper trade techniques and effective instructing methods.

(2) Three-months refreshing programmes for instructors to up-grade in advanced trade techniques and instructing methods.

(3) Three-months programme for the directors and chief managing staff of vocational training centres, to provide the participants with knowledge as regards educational processes, workshop management, methods of planning and analysis, improving the training and administration of the Centre.

(4) Four-months programme designed to up-grade industrial foremen in the technological side of the trade and to impart the necessary knowledge in the field of management and human relations.

(5) Six-months programme for Engineering and Shop-Drawing draftsmen.

(6) Two-months short programmes for storemen of vocational training centres and industrial inspectors.

IV. Training for Supervisors

This includes both supervisors in production and in the various staff or specialized functions. As mentioned before, first and second levels of production supervisors require, besides the technical know-how of their trade, some specific training in the arts and skills of supervision. These include leadership, communications, human relations, work organization and in other areas of personnel, practice (interviewing, discipline, merit rating, etc.). In addition, they should have a working knowledge of some simple aspects of industrial engineering such as work study, production planning and control, quality control maintenance, etc.

As for the various other staff supervisors, their training is similar to that of their line counterparts with the difference of the training for development of technical know-how. This is being replaced by one or more of the staff functions (personnel, accounting, marketing, etc.) depending on his specialized function.

In general, the aims of training for supervisors should be to help them in the following:

- Develop those skills related to their every day work.
- Widen the range of their knowledge with respect to the work of other functions related to their sections.
- Getting a clear picture of the social and economical factors that affect industry as a whole and his organization in particular.

Supervisory Training in PVTD

The Productivity and Vocational Training Department started its activities in the field of training supervisors in 1956.

Its section supervisory training was divided into three units to cope with its three main functions, namely:

(1) To run courses for trainers belonging to large and middle-sized enterprises and to assist them in running them in their respective companies.

(2) To conduct courses in small enterprises through trainers directly employed by the department.

(3) To keep records and statistics on the work carried out in industry in the supervisory training field and to prepare, translate, adapt and develop training material.

The courses for supervisors start with the basic courses Training within Industry, Job Relations Training, Job Methods Training, Job Instructions Training supplemented with a course on safety. The section is providing the field with specific courses in the different functions of management: Personnel, Production, Finance ... etc.

As a link between the standard Training within Industry courses and the specialized courses a course in training techniques is being introduced. Its purpose is to raise the supervisor's skills in discussion leadership, lecturing, case studies, role playing, etc. The other courses run by the department for supervisors in the staff functions are prepared and presented by the specialized sections of the department; industrial engineering, safety and cost accounting.

In-Plant Training for Supervisors

In the field of supervisory training some companies have their own training sections. They start their training programme by sending the trainers to attend courses provided by the PVTD. These trainers then remain in contact with the Department and work in close co-operation towards further development of supervisory training programmes and methods.

V. - Missions and Fellowships

For those professions and trades where the number of required candidates does not validate the investment for a training institution, it is more economical to send fellows to get their degree or training abroad.

UAR has a big number of students and technicians on fellowships abroad, (over 6,000) and granted 2.339 scholarships and missions for foreign students to study in its universities and Institutes in 1964/65.

2. MANAGEMENT DEVELOPMENT

As industrialization gains momentum, and larger capital is outlayed, the pace of innovation, the intensive mechanization and the growth of market, all lead to the growth of the industrial organizations and they becoming more complicated. As a result of which the effectiveness of management becomes increasingly dependent upon administrative skill.

The strength of any organization depends largely on its management. The higher the competence of its managerial staff, the more efficient becomes the organization from both, the accumulation of capital (thus working satisfactorily towards economic growth) and the development of its manpower categories (thus providing for the continuing development of competent replacement for a minimized turnover of its personnel).

UAR is still facing a lack of the trained business management and key personnel necessary to cope with its great pace of industrialization. While some companies are highly developed and possess a great number of qualified managers, others are newly introduced and lack the experienced staff for their efficient running.

The textile industry which is considered to be the oldest, developed a great number of qualified managers and imported great experience from the highly industrialized countries through sending their staff on mission or hiring the help of foreign experts. Managers in Petroleum industries through their tight contact with their counterparts in the industrialized countries, are well acquainted with the modern techniques and systems of management.

To cope with the very ambitious industrialization scheme of modern UAR, several management development institutions were established by the government, some with the aid of foreign or United Nations technical assistance. A management Association was also formed to help in the up-grading of managerial skill.

Programmes for management education are now being undertaken through the established institutes and through the extension of the curriculum at universities to include business administration and industrial management.

3. MANAGEMENT DEVELOPMENT INSTITUTIONS

I. National Institute for Management Development (NIMD)

Founded in 1961 with a Ford Foundation grant. It was attached to the Presidency of the Republic till 1964 when it became part of the Central Agency for organization and administration.

Currently NIMD offers four types of training programmes:

Type I: Top Management Programmes

- Designed to serve the highest echelon of the management hierarchy. They are fully residential with an average length of 6 weeks.
- The programme curriculum strikes a balance between decision making competence and the understanding of management environment and raising consciousness of their leading role in a developing economy.

Type II: Regular Middle Management Programme

- Designed for the potential supply of top managers in the short run.
- Its candidates are middle management ranks, the average members being identified for potential top management

positions. The less promising would benefit from the programme and acquire a deeper understanding of their functional responsibilities.

- The programme puts emphasis on functional up-dating associated with an adequate understanding of the several functions and their interrelations.
- This calls for a 8 week's residential course.

Type III: Specialized Programmes

- Are largely "technique programmes", designed to improve the specific functional skills of lower-middle-management personnel.
- They are not residential and their arrangement and procedures not yet standardized.
- The institute started with the specialized programme named "The industrial Relation Programme", in 8 weeks with 4 sessions per week.
- The programme content was developed to cope with the growing demands made upon industrial relations managers in UAR companies as a result of the recent changes in the labour laws.

II. Productivity and Vocational Training Department (PVTD)

The Productivity and Vocational Training centre was set up in 1954 with the assistance of the ILO. When the Ministry of Industry was established in 1956, the centre joined it and became one of its departments.

PVTD is divided into two main divisions: Vocational Training and Productivity. The Productivity division is further divided into the following five sections: Industrial Engineering, Management Accounting, Safety, Supervisory Training and technical Information.

Each of the first four sections runs training courses, and offers consulations in its field of specialization. The last section conveys technical information about the latest development in the field of productivity. It also publishes a quarterly magazine and technical booklets.

The training courses run by the productivity division are mainly to prepare middle management for top management positions and very few are intended for up-grading present top management.

With the help of ILO experts a 4 weeks course was undertaken in 1962 for top management to introduce them to the general principles of higher management. Other three days meetings are being organized for top management in some organizations to discuss specific aspects of management.

Top Management Appreciation Sessions

In general, PVTD mainly conducts appreciation sessions with top management prior to its middle management courses.

The training programmes are first sold to top management before being promoted. Depending upon the field of specialization the understanding and acceptance of Industry are obtained through:

(1) The formation of an advisory committee of specialists from industry to help in conveying training needs, plan and organize for the courses. Further those committee members keep to contact with the recipients of the training offered to provide the necessary "feedback" to keep the programme adjust to an acceptable level of performance for the trainee.

(2). The presentation of a brief but factual account of the programme to top management. These appreciation sessions are conducted by the expert in charge of the course (native or ILO) for 1 to 3 meetings. They aim at providing key people with the necessary backgrounds and explain what

will be covered in the training programme. This presentation stresses also the benefits of the programme to the individuals attending and to their companies, making use of cases and examples of achievements reached or savings made through previous programmes or to be expected from such a programme.

Specialized Courses

PVTD provides courses for management development in the different aspects of staff function, both in a general form and as specialized course for each function. These are:

Work Study	Marketing
Production Planning	Safety
Quality Control	Supervisory Skills
Cost Estimating & Cost Control	Merit Rating
Finance Planning and Control	Moral and Motivation

These specialized courses are meant to train and up-grade staff specialist and are followed by practical applications on the job with the help of the department experts, for a period of about 6 months.

III. Institute of Public Administration

Its main objective is to improve the quality of administrative and managerial personnel. It was established in Cairo in 1954 with the help of the United Nations to be financed jointly by the United Nations and the Egyptian Government for a five-year period. Since 1963 it was attached together with the NIMD to the Republic Presidency and later on in 1964 both formed part of the central agency for organization and administration.

It provides systematic training for public administrators, including such subjects as principles of administrators, organization and management, personnel administration, financial administration, employee relations and other sociological and economical subjects.

It also conducts some basic research in the area of public administration, and provides teaching materials and publications for educational programmes.

Types of Courses offered by the IPA

Course No.1: General Course of Public Administration
for a full time period of six months.

- Candidates are accepted holding senior government positions and performing work involving planning, administration and co-ordination.

Course No.2: Supervisors'Course
for a period of 3 months.

- For government officials holding middle positions.
- The subjects are: Human Relations, Organization and Methods, Procedure Simplification Stores and Purchase, Budget Personnel Administration and Training on Modern Office equipment.

Course No.3: Executive Development Courses for different Ministries and Public Utilities, on demand. (e.g., Ministry of Social Affairs, Ministry of Education, Ministry of Labour, etc..).

OTHER INSTITUTIONS

The Universities and Higher Institutes provide courses related to industry e.g. the Faculty of Engineering offers up-grading courses in the industrial engineering department to its graduated engineers who are working in the industry. Also, the Faculty of Commerce is offering graduate courses in the fields of business administration, production management, marketing, cost accounting and business financing.

FINAL REMARKS

Assessment of Manpower Needs in UAR

The actual training needs for the various levels rely mainly on the impressions of the managers and of the industrial organizations.

The manpower forecast therefore is influenced to a great extent by their individual concepts of the definition, duties and requirements of each level of skill and branch of functions.

Therefore, the different authorities in charge of training in the UAR are putting their efforts together, to unify the terms used for the definitions of jobs and to consider training needs on the basis of the relation between the job content, the extent and nature of the education, training and experience, and the required level of performance efficiency on the job.

Raising the Labour Productivity

In manpower planning, the rate of growth of labour input consists of both the rate of growth in the quality of labour and the rate of growth in the number of workers.

Besides the increase of labour productivity through the increase of capital per worker, the improvement in other factors such as education, health conditions, nutrition, social security and others are also very important in raising labour productivity. From both technical and human points of view planning for better working conditions, accident prevention and improvement of health, dwelling and nutrition conditions are necessary for the conservation of human resources and the preservation of a high level of productivity.

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